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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/867,685 | 05/31/2001 | Susumu Takahashi | 20-115 | 7220 |

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Arnold International

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Great Falls, VA 22066-0129

EXAMINER

PATEL, NITIN

ART UNIT

PAPER NUMBER

2673

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/867,685

Applicant(s)

TAKAHASHI, SUSUMU

Examiner

Nitin Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 4,6-10,12-16,20,22-26 and 28-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,11,17-19,21 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,2,5,17,18,21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Herbert (U.S. Patent No. 6,219,186) in view of Holmes, Jr. (U.S. Patent No. 4,172,632).

As per claims 1,17 Herbert shows a display means that displays left and right images at respective left and right positions on a display panel (In fig.7 element 710), the left and right images being partially overlapped on the display panel (In fig.7 image being interlaced with paths 740 and 750 and 715 and 713); an optical magnifying system having left and right optical viewing systems with respective optical axes that are aligned substantially parallel with one another (In fig.7 element 776 and 778), the left optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the right optical viewing system (in fig.7 element 728 and 726 image being seen by left viewing to see right beam lens view), and the right optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the left optical viewing system(In fig.7 element 728 and 726); wherein, of the left and right images displayed on the display panel, only the left images are viewable at the left exit

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pupil and only the right images are viewable at the right exit pupil (In col.16 lines 40 to col.17 and 18 description of figure 7).

Herbert does not show a 3-D display device to produce a three-dimension image. Holmes shows a 3-D display device to produce a three-dimension image (In fig.1, 2,3). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to have used teaching three dimension display of Holmes into display device of Herbert's because it would have enlarged an image and move nearer to the viewer or to shrink and recede an image.

As per claims 5,21 Herbert shows the distance between the exit pupils is adjustable by changing the distance between the left and right viewing systems, which changes the distance between the left and right displayed images (in col.4 lines 53-67).

As per claims 2, 18 Herbert shows a display means that displays left and right images at respective left and right positions on a display panel (In fig.7 element 710), the left and right images being partially overlapped on the display panel (In fig.7 image being interlaced with paths 740 and 750 and 715 and 713); an optical magnifying system having left and right optical viewing systems with respective optical axes that are aligned substantially parallel with one another (In fig.7 element 776 and 778), the left optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the right optical viewing system (in fig.7 element 728 and 726 image being seen by left viewing to see right beam lens view), and the right optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the left optical viewing system(In fig.7 element 728 and 726); wherein, of the left and right

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images displayed on the display panel, only the left images are viewable at the left exit pupil and only the right images are viewable at the right exit pupil (In col.16 lines 40 to col.17 and 18 description of figure 7), the left and right images have polarizations which are independent of each other(In fig.7); the left and right optical viewing systems of the optical magnifying system have polarizations which are independent of each other; the polarization of the right image is the same as the polarization of the right viewing system, and the polarization of the left image is the same as the polarization of the left viewing system(In fig.7 and description of figure 7 in specification).

Herbert does not show a 3-D display device to produce a three-dimension image.

Holmes shows a 3-D display device to produce a three-dimension image (In fig.1, 2,3). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to have used teaching three dimension display of Holmes into display device of Herbert's because it would have enlarged an image and move nearer to the viewer or to shrink and recede an image.

3. Claims 3,11,19,27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herbert (U.S. Patent No. 6,219,186) in view of Holmes, Jr. (U.S. Patent No. 4,172,632) in further view of Bos (U.S. patent No. 4,719,507).

As per claims 3,11,19,27 Herbert shows a display means that displays left and right images at respective left and right positions on a display panel (In fig.7 element 710), the left and right images being partially overlapped on the display panel (In fig.7 image being interlaced with paths 740 and 750 and 715 and 713); an optical magnifying

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system having left and right optical viewing systems with respective optical axes that are aligned substantially parallel with one another (In fig.7 element 776 and 778), the left optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the right optical viewing system (in fig.7 element 728 and 726 image being seen by left viewing to see right beam lens view), and the right optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the left optical viewing system(In fig.7 element 728 and 726); wherein, of the left and right images displayed on the display panel, only the left images are viewable at the left exit pupil and only the right images are viewable at the right exit pupil (In col.16 lines 40 to col.17 and 18 description of figure 7). Herbert does not show a 3-D display device to produce a three-dimension image.

Holmes shows a 3-D display device to produce a three-dimension image (In fig.1, 2,3). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to have used teaching three dimension display of Holmes into display device of Herbert's because it would have enlarged an image and move nearer to the viewer or to shrink and recede an image

Herbert does not show a display panel in a time multiplexed manner with time division to synchronize between the right and left optical viewing system.

Bos shows a display panel in a time multiplexed manner with different time division to synchronized between the right and left optical viewing system (In fig.5a-5c and In Col.6 lines 29-67).

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It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to have allowed the teaching of Bos's timing method of displaying image on display with display device of Herbert's combined display device because it would have reduced the image flicker rate by controlling a image signal using timing interval shows on a display.

Response to Arguments

4. Applicant's arguments with respect to claims 1-3,5,11,17-19,21,27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 571-272-7677. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Nitin Patel". The signature is fluid and cursive, with the first name "Nitin" and last name "Patel" clearly distinguishable.

Nitin Patel
Examiner
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